

REMARKS

Claims 1-23 are pending in the present application. By this Amendment, original claims 8, 13 and 15 have been amended. Applicant respectfully requests reconsideration of the present claims in view of the foregoing amendments and the following remarks.

I. Formal Matters:

Election of Species Requirement and Improper Restriction Requirement:

The July 13, 2010 Office Action required election of a single soil applied herbicide specie. Applicant elected, **with traverse**, the species comprising a mixture of the (S) and (R) isomers of metolachlor in the ratio of 50-100% (S) to 50-0% (R) as recited in claim 7. Applicant further elected the specie comprising the (S) isomer of metolachlor if Examiner Pryor did not consider the claimed mixture of the (S) and (R) isomers of metolachlor in the ratio of 50-100% (S) to 50-0% (R) as recited in claim 7 to be a single species.

In response to Applicant's election of the single soil applied herbicide specie, Examiner Pryor withdrew from consideration (1) dependent claims 8-15 directed to other non-elected soil applied herbicide species, (2) dependent claim 16 directed to the herbicidal composition of independent claim 1, limited to the above elected soil applied herbicide specie, and further comprising a safener, and (3) dependent claims 17-23 directed to a method of controlling undesired plant growth using the herbicidal composition of independent claim 1.

Applicant respectfully submits that Examiner Pryor has improperly withdraw from consideration (1) dependent claim 16 directed to the herbicidal composition of independent claim 1, limited to the above elected soil applied herbicide specie, and further comprising a safener, and (2) dependent claims 17-23 directed to a method of controlling undesired plant growth using the herbicidal composition of independent claim 1. Examiner Pryor has effectively required an improper restriction requirement between the following groups of claims:

Group I, claims 1-15 directed to the herbicidal composition of independent claim 1 with the single elected species of recited in claim 7;

Group II, dependent claim 16 directed to the herbicidal composition of independent claim 1, limited to the elected soil applied herbicide specie of claim 7, and further comprising a safener; and

Group III, dependent claims 17-23 directed to a method of controlling undesired plant growth using the herbicidal composition of independent claim 1.

The October 13, 2010 non-final Office Action states the following on page 3, lines 18-20, regarding the July 13, 2010 Office Action election of species requirement:

The Elected invention comprising metolachlor and paraffin is not allowed. See rejections above. The Election requirement is final since numerous references would be required to address all each limitation in the claims.

It is not clear to Applicant what Examiner Pryor is referring to in the above-referenced statement. As noted above, Applicant elected, **with traverse**, the species comprising a mixture of the (S) and (R) isomers of metolachlor in the ratio of 50-100% (S) to 50-0% (R) as recited in claim 7, not the combination of "metolachlor and paraffin." Further, Applicant respectfully submits that the number of references "required to address all each limitation in the claims" has never been a criteria for making an election of species requirement or a restriction requirement.

For at least the reasons provided above, Applicant respectfully submits that the withdrawal of dependent claims 16-23 from consideration is improper. Further, for at least the reasons provided above, Applicant requests examination of at least claims 1-7 and 16-23 as a single group.

II. Prior Art Rejections:

Rejection of Previously Presented Claims 1-7 Under 35 U.S.C. §103(a) In View Of U.S. Patent No. 3,997,322 (Ratledge)

Previously presented claims 1-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable in view of U.S. Patent No. 3,997,322 issued to Ratledge (hereinafter, "Ratledge"). This rejection is respectfully traversed.

The teaching of Ratledge is directed to a spray oil composition, which enhances

the effectiveness of select herbicides. The spray oil composition comprises (i) a major amount of a petroleum hydrocarbon oil having an unsulfonated residue of at least 75 and a viscosity at 100°F in the range of 60 to 350, and (ii) a minor amount of a vegetable oil. See, for example, the Abstract, and column 2, lines 39-50.

Ratledge describes the petroleum hydrocarbon oil beginning in column 2, line 51, and includes a Table in column 2 that provides properties of the petroleum hydrocarbon oil. Of particular relevance to the present invention is that Ratledge discloses that the petroleum hydrocarbon oil has a distillation range at 10 mm Hg of 300°F (148°C) to 500°F (260°C).

The October 13, 2010 non-final Office Action admits that the teaching of Ratledge fails to disclose, teach or suggest (1) compositions comprising a petroleum hydrocarbon oil having a C13 to C55 carbon number and (2) compositions comprising metolachlor. However, the October 13, 2010 non-final Office Action still concludes that the teaching of Ratledge makes obvious Applicant's claimed invention as embodied in claims 1-7. Specifically, the October 13, 2010 non-final Office Action states the following from page 2, line 17 to page 3, line 3:

Ratledge does not specify the instant C13 to C55 carbon number for the instant paraffinic oil and the elected metolachlor herbicide. It would have been obvious to employ the instant C13 to C55 distributed paraffinic oil since Ratledge mentions no specific carbon distribution for the paraffinic hydrocarbon. Also note, Ratledge teaches that petroleum hydrocarbon (paraffinic oil) spray oils enhance the effectiveness of certain herbicides (column 2 lines 14-36). The term "certain herbicides" makes it obvious to the possibility of trying herbicides other than triazines specifically recited in Ratledge. In the absence of unexpected results for the C13 to C55 distributed paraffinic oil and metolachlor, Ratledge makes obvious the use of the paraffinic oil and metolachlor. Since Ratledge is silent to the carbon distribution of the paraffinic oil, it would have been obvious to employ the instant paraffinic oil at the time of Ratledge's invention.

Applicant disagrees.

Applicant respectfully submits that the teaching of Ratledge, taken alone or in view of the general state of the art, would not have motivated one skilled in the art to formulate a herbicidal composition comprising a mixture of (1) at least one soil-applied herbicide comprising metolachlor, and (2) a synergistically effective amount of a lipophilic additive comprising at least

one hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 as recited in independent claim 1.

The teaching of Ratledge does not disclose, teach or suggest to one skilled in the art to formulate a herbicide composition comprising metolachlor. Further, the teaching of Ratledge does not disclose, teach or suggest to one skilled in the art to formulate a herbicide composition comprising any amount of at least one hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55.

Applicant respectfully submits that the teaching of Ratledge actually teaches away from herbicide compositions containing Applicant's recited hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 given that Ratledge specifically instructs one skilled in the art to utilize a petroleum hydrocarbon oil fraction having a distillation range at 10 mm Hg of 300°F (148°C) to 500°F (260°C), which presumably (i) contains fraction components that are not present in Applicant's recited hydrocarbon fluid (i.e., fraction components having a boiling point of from 148°C to less than 190°C) and (ii) does not contain fraction components that are present in Applicant's recited hydrocarbon fluid (i.e., fraction components having a boiling point of greater than 260°C up to 280 °C).

Applicant respectfully submits that the teaching of Ratledge does not provide any guidance to one skilled in the art, when formulating a spray oil composition, to (1) contemplate the use of metolachlor instead of the specifically disclosed triazine herbicides of Ratledge, (2) contemplate the use of a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 select instead of the petroleum hydrocarbon oil fraction having a distillation range at 10 mm Hg of 300°F (148°C) to 500°F (260°C) of Ratledge, and (3) subsequently combine metolachlor with a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation

range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 to form a spray herbicidal composition.

Applicant respectfully submits that the only motivation to focus on the specific combination of metolachlor with a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55, and not the specifically disclosed composition components of Ratledge or thousands of other possible composition components in the art, has been gleaned from Applicant's own specification, not from the art of record. As Examiner Pryor is aware, "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention", *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). For at least this reason, Applicant respectfully submits that the rejection of claims 1-7 in view of the proposed modification of the teaching of Ratledge is improper.

Applicant further notes that in *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007) (hereinafter, "the *KSR* case") and cases after the *KSR* case, the Court requires some motivation or reason for one skilled in the art to (i) combine elements of the prior art or (ii) modify a known compound in the way that a new invention does in order to render the new invention obvious. See, for example, the Court decision in *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, No. 2006-1329 (Fed. Cir. 2007) (hereinafter, "the *Takeda* case"), wherein the Federal Circuit stated:

While the KSR Court rejected a rigid application of the teaching, suggestion, or motivation ("TSM") test in an obviousness inquiry, the Court acknowledged the importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" in an obviousness determination. *KSR*, 127 S. Ct. at 1731. Moreover, the Court indicated that there is "no necessary inconsistency between the idea underlying the TSM test and the Graham analysis." *Id.* As long as the test is not applied as a "rigid and mandatory" formula, that test can provide "helpful insight" to an obviousness inquiry. *Id.* Thus, in cases involving new chemical compounds, it remains necessary to identify some reason that would have led a chemist to modify a known compound in a particular manner to establish prima facie obviousness of a new claimed compound.

Although the holding in the *Takeda* case involved motivation for modifying a known compound, Applicant respectfully submits that a similar analysis applies to the required motivation for selecting and combining possible herbicidal composition components from hundreds (or thousands) of potential herbicidal composition components.

As discussed above and consistent with the holdings in the *KSR* case and the *Takeda* case, the teaching of Ratledge fails to provide any reason that would have lead one skilled in the art to (1) contemplate the use of metolachlor instead of the specifically disclosed triazine herbicides of Ratledge, (2) contemplate the use of a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 instead of the petroleum hydrocarbon oil fraction having a distillation range at 10 mm Hg of 300°F (148°C) to 500°F (260°C) as disclosed in Ratledge, and (3) subsequently combine metolachlor with a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 to form a spray herbicidal composition.

The October 13, 2010 non-final Office Action appears to suggest that the reason one skilled in the art, given the teaching of Ratledge, would have used Applicant's recited hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 is because Ratledge fails to mention a specific carbon number distribution range for the disclosed petroleum hydrocarbon oil fraction in the spray herbicide composition of Ratledge. See, the above-noted section of the October 13, 2010 non-final Office Action. Further, the October 13, 2010 non-final Office Action appears to suggest that the reason one skilled in the art, given the teaching of Ratledge, would have used metolachlor in the spray herbicide composition of Ratledge is because Ratledge uses the phrase "certain herbicides" to describe suitable herbicides. For at least the reasons provided above, Applicant respectfully submits that the teaching of Ratledge fails to teach or suggest Applicant's claimed herbicidal composition, or the components used therein (namely, Applicant's recited hydrocarbon fluid and Applicant's recited metolachlor), as recited in Applicant's claim 1-7.

For at least the reasons given above, Applicant respectfully submits that a *prima facie* case of obviousness has not been made with regard to the rejection of independent claim 1 in view of the teaching of Ratledge. Since claims 2-7 (and claims 16-23) depend from independent claim 1 and recite additional claim features, the teaching of Ratledge also fails to make obvious Applicant's claimed invention as embodied in dependent claims 2-7 (and dependent claims 16-23). Accordingly, withdrawal of this rejection is respectfully requested.

Rejection of Previously Presented Claims 1 and 3-7 Under 35 U.S.C. §103(a) In View Of U.S. Patent No. 3,551,131 (Musselman)

Previously presented claims 1 and 3-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable in view of U.S. Patent No. 3,551,131 issued to Musselman et al. (hereinafter, "Musselman"). This rejection is respectfully traversed.

The teaching of Musselman is directed to a plant growth stimulant composition comprising a herbicide, a non-phytotoxic oil, and a fertilizer. See, for example, the Abstract, and column 1, lines 36-43.

Like the teaching of Ratledge, the teaching of Musselman fails to disclose, teach or suggest (1) compositions comprising metolachlor, (2) compositions comprising a lipophilic additive comprising at least one hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55, and (3) compositions comprising (i) metolachlor in combination with (ii) a lipophilic additive comprising at least one hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 as recited in independent claim 1.

Even with the above-noted deficiencies in the teaching of Musselman, the October 13, 2010 non-final Office Action states the following on page 3, lines 9-16:

Musselman et al. does not exemplify an invention comprising instant herbicides and instant C13 to C55 distributed paraffin or wherein the herbicide is metolachlor. It would have been obvious to make an invention comprising a C13 to C18 paraffin. One would have been motivated to do this since

Musselman et al. suggest the combination. Also note, Musselman et al. teaches that a variety of herbicides is suitable the instant invention (column 2 lines 31-34). The term "and the like" in reference to useful herbicides makes it obvious to try herbicides other than the triazines specifically recited in Musselman et al.

For reasons similar to those given above with regard to the rejection of claims 1-7 in view of Ratledge, Applicant disagrees.

Applicant respectfully submits that the teaching of Musselman, taken alone or in view of the general state of the art, would not have motivated one skilled in the art to formulate a herbicidal composition comprising a mixture of (1) metolachlor, and (2) a synergistically effective amount of a lipophilic additive comprising at least one hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 as recited in independent claim 1.

As noted above, the teaching of Musselman does not disclose, teach or suggest to one skilled in the art to formulate a herbicide composition comprising metolachlor. Further, as noted above, the teaching of Musselman does not disclose, teach or suggest to one skilled in the art to formulate a herbicide composition comprising any amount of at least one hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55.

Applicant respectfully submits that the teaching of Musselman actually teaches away from herbicide compositions containing Applicant's recited hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 given that Musselman specifically instruct one skilled in the art to utilize (i) paraffins and/or cycloparaffins having up to eighteen carbon atoms (see, column 1, line 53 to column 2, line 8) or (ii) a hydrocracker recycle oil having a boiling point of from 500 °F to 600°F (see, column 2, lines 63 to 70, and Table III of the Examples), not Applicant's recited hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation

range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55.

Similar to the teaching of Ratledge, the teaching of Musselman does not provide any guidance to one skilled in the art, when formulating a plant growth stimulant composition, to (1) contemplate the use of metolachlor instead of the specifically disclosed triazine herbicides of Musselman, (2) contemplate the use of a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 select instead of the paraffin/cycloparaffin oil or the hydrocracker recycle oil of Musselman, and (3) subsequently combine metolachlor with a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 to form a plant growth stimulant composition.

Applicant respectfully submits that the only motivation to focus on the specific combination of metolachlor with a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55, and not the specifically disclosed composition components of Musselman or thousands of other possible composition components of the art, has again been gleaned from Applicant's own specification, not from the art of record.

In addition, the teaching of Musselman fails to provide any reason that would have lead one skilled in the art to (1) contemplate the use of metolachlor instead of the specifically disclosed triazine herbicides of Musselman, (2) contemplate the use of a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to about C55 instead of the paraffin/cycloparaffin oil or the hydrocracker recycle oil of Musselman, and (3) subsequently combine metolachlor with a hydrocarbon fluid consisting of a paraffin oil derived from a refined fraction of petroleum oil with a distillation range at 10 mm Hg of about 190 °C to 280 °C and with a carbon number distribution from about C13 to

about C55 to form a plant growth stimulant composition.

The October 13, 2010 non-final Office Action appears to suggest that the reason one skilled in the art, given the teaching of Musselman, would have used metolachlor in the plant growth stimulant composition of Musselman is because Musselman uses the phrase “and the like” when referring to suitable herbicides in column 2, lines 31-34. For at least the reasons provided above, Applicant respectfully submits that the teaching of Musselman fails to teach or suggest Applicant’s claimed herbicidal composition, or the components used therein (namely, Applicant’s recited hydrocarbon fluid and Applicant’s recited metolachlor), as recited in Applicant’s claim 1 and 3-7.

For at least the reasons given above, Applicant respectfully submits that a *prima facie* case of obviousness has not been made with regard to the rejection of independent claim 1 in view of the teaching of Musselman. Since claims 3-7 (and claims 16-23) depend from independent claim 1 and recite additional claim features, the teaching of Musselman also fails to make obvious Applicant’s claimed invention as embodied in dependent claims 3-7 (and dependent claims 16-23). Accordingly, withdrawal of this rejection is respectfully requested.

III. Conclusion:

Applicant submits that claims 1-23 define patentable subject matter. Accordingly, Applicant respectfully requests allowance of these claims.

Should Examiner Pryor believe that further action is necessary to place the application in better condition for allowance, Examiner Pryor is respectfully requested to contact Applicant’s representative at the telephone number listed below.

Amendment And Response
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No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 503025.

Respectfully submitted,
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W&K Matter No.: 10075.0050USWO
Syngenta Docket No.: 70344